

In the claims:

Please amend claims 1, 4, 9, 17, 19, 21 and 22 as follows:

1. (Twice Amended) An antibody that selectively binds to a polypeptide selected from the group consisting of:

a) a polypeptide encoded by a nucleic acid molecule which hybridizes in 0.1 x SSC at 68°C to a nucleic acid molecule comprising SEQ ID NO:1, wherein 1) the polypeptide is a GPCR, 2) failure to express the polypeptide results in embryonic lethality in *Drosophila*, and 3) the polypeptide modulates the effect of heat stress in *Drosophila*;

b) a polypeptide comprising an amino acid sequence which is at least 85% homologous to the amino acid sequence of SEQ ID NO:2, wherein 1) the polypeptide is a GPCR, 2) failure to express the polypeptide results in embryonic lethality in *Drosophila*, and 3) the polypeptide modulates the effect of heat stress in *Drosophila*; and

c) a polypeptide comprising amino acid residues 1 to 200 of SEQ ID NO:2.

4. (Twice Amended) A kit useful for the detection of a polypeptide, the kit comprising a carrier containing one or more containers comprising a first container containing an antibody that selectively binds to a polypeptide selected from the group consisting of:

a) a polypeptide comprising the amino acid sequence of SEQ ID NO:2, wherein the polypeptide is encoded by a nucleic acid molecule which hybridizes in 0.1 x SSC at 68°C to a nucleic acid molecule comprising SEQ ID NO:1, wherein 1) the polypeptide is a GPCR, 2) failure to express the polypeptide results in

embryonic lethality in Drosophila, and 3) the polypeptide modulates the effect of heat stress in Drosophila;

*Rebut 2*  
*B3*  
b) a polypeptide comprising an amino acid sequence which is at least 85% homologous to the amino acid sequence of SEQ ID NO:2, wherein 1) the polypeptide is a GPCR, 2) failure to express the polypeptide results in embryonic lethality in Drosophila, and 3) the polypeptide modulates the effect of heat stress in Drosophila; and

c) a polypeptide comprising amino acid residues 1 to 200 of SEQ ID NO:2.

9. (Amended) An isolated antibody or fragment thereof that selectively binds to:

a) a polypeptide comprising SEQ ID NO:2;  
b) a polypeptide comprising amino acid residues 1 to 200 of SEQ ID NO:2;

*B4*  
c) a polypeptide consisting of an antigenic fragment of SEQ ID NO:2; or

d) a polypeptide consisting of a fragment of SEQ ID NO:2, wherein said fragment comprises at least 50 contiguous amino acid residues of SEQ ID NO:2.

17. (Amended) An isolated antibody or fragment thereof produced by immunizing an animal with:

*B5*  
a) a polypeptide comprising SEQ ID NO:2;  
b) a polypeptide comprising amino acid residues 1 to 200 of SEQ ID NO:2;

c) a polypeptide consisting of an antigenic fragment of SEQ ID NO:2; or

B5  
d) a polypeptide consisting of a fragment of SEQ ID NO:2,  
wherein said fragment comprises at least 50 contiguous amino  
acid residues of SEQ ID NO:2,

wherein the antibody specifically binds to the polypeptide  
comprising SEQ ID NO:2.

B6  
19. (Amended) An antibody that selectively binds the  
hydrophilic domain of an mth polypeptide between hydrophobic  
domains five and six of SEQ ID NO:2.

21. (Amended) A kit comprising an antibody which selectively  
binds to a polypeptide selected from the group consisting of:

a) a fragment of the amino acid sequence of SEQ ID NO:2,  
wherein 1) the fragment is a GPCR, 2) failure to express the  
fragment results in embryonic lethality in Drosophila, and 3)  
the fragment modulates the effect of heat stress in Drosophila;

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b) a polypeptide comprising the amino acid sequence of  
SEQ ID NO:2, wherein the polypeptide is encoded by a nucleic  
acid molecule which hybridizes in 0.1 x SSC at 68°C to a nucleic  
acid molecule comprising SEQ ID NO:1, wherein 1) the polypeptide  
is a GPCR, 2) failure to express the polypeptide results in  
embryonic lethality in Drosophila, and 3) the polypeptide  
modulates the effect of heat stress in Drosophila; and

c) a polypeptide comprising an amino acid sequence which  
is at least 85% homologous to the amino acid sequence of SEQ ID  
NO:2, wherein 1) the polypeptide is a GPCR, 2) failure to  
express the polypeptide results in embryonic lethality in  
Drosophila, and 3) the polypeptide modulates the effect of heat  
stress in Drosophila,

and instructions for use.

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22. (Amended) A kit comprising an antibody which selectively binds to:

- B7
- a) a polypeptide comprising SEQ ID NO:2;
  - b) a polypeptide comprising amino acid residues 1 to 200 of SEQ ID NO:2;
  - c) a polypeptide consisting of an antigenic fragment of SEQ ID NO:2; or
  - d) a polypeptide consisting of a fragment of SEQ ID NO:2, wherein said fragment comprises at least 50 contiguous amino acid residues of SEQ ID NO:2.
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